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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/531,391

04/15/2005

Masashi Watanabe

070759-0033

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EXAMINER

NIU, XINNING

ART UNIT

PAPER NUMBER

2828

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

02/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/531,391

Applicant(s)

WATANABE ET AL.

Examiner

Xinning(Tom) Niu

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2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :04/15/2005, 05/04/2006, 12/07/2006.

DETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

Information Disclosure Statement

2. The information disclosure statement (IDS) were submitted on 4/15/2005, 5/04/2006 and 12/07/2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1, 2, 3, 4 rejected under 35 U.S.C. 102(b) as being anticipated by De Poorter (U.S. Patent 5,578,863).
5. Regarding Claim 1, De Poorter discloses:
 - Semiconductor laser device (10) comprising a semiconductor laser element (3) inside an airtight sealed package (20) (Figure 1).

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- Active layer made of AlGaAs based crystal (Col 3, Lines 56-59)
- Atmospheric gas inside the package contains oxygen (Col 4, Lines 21-23).

6. Regarding Claim 2, De Pooter discloses:

- Semiconductor laser element having a dielectric oxide film (4) formed on a laser emission surface (Figure 1; Col 3, Lines 59-62).

7. Regarding Claim 3, De Pooter discloses:

- Atmospheric gas in a mixture of oxygen and nitrogen with an oxygen content of 20% or more (Col 2, Lines 23-44).

8. Regarding Claim 4, De Pooter discloses:

- Semiconductor laser emitting light having a wavelength of 0.9 μm or less

9. Regarding Claim 5, De Pooter discloses:

- Semiconductor laser device (10) comprising a semiconductor laser element (3) inside an airtight sealed package (20) (Figure 1).
- Laser element operating at a output power of 30mW or more (Col 3, Lines 56-59)

- Atmospheric gas inside the package contains oxygen (Col 4, Lines 21-23).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5, 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Pooter in view of Hall et al. (U.S. Patent 5,770,473).

12. Regarding claim 5, De Pooter discloses:

- Semiconductor laser device (10) comprising a semiconductor laser element (3) inside an airtight sealed package (20) (Figure 1).
- Atmospheric gas inside the package contains oxygen (Col 4, Lines 21-23).

De Pooter does not disclose:

- Laser element operating at an output power of 30mW or more.

However, Hall et al. discloses:

- Laser element operating at an output power of 50 mW (Col 2, Lines 51-53).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the laser apparatus as taught by De Pooter with the high power laser device as disclosed by Hall et al. in order to obtain a higher output power and a greater transmission distance.

13. Regarding claim 6, De Pooter discloses:

- Atmospheric gas is a mixture of nitrogen and oxygen, with an oxygen content of 20% or more (Col 2, Lines 23-44).

14. Regarding claim 7, De Pooter discloses:

- Semiconductor laser device (10) comprising a semiconductor laser element (3) inside an airtight sealed package (20) (Figure 1).
- Active layer made of AlGaAs based crystal (Col 3, Lines 56-59)
- Atmospheric gas inside the package contains oxygen (Col 4, Lines 21-23).

De Pooter does not disclose:

- Laser element operating at an output power of 30mW or more.

However, Hall et al. discloses:

- Laser element operating at an output power of 50 mW (Col 2, Lines 51-53).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the laser apparatus as taught by De Pooter with

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the high power laser device as disclosed by Hall et al. in order to obtain a higher output power and a greater transmission distance.

15. Regarding claim 8, De Pooter discloses:

- Atmospheric gas is a mixture of nitrogen and oxygen, with an oxygen content of 20% or more (Col 2, Lines 23-44).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aikiyo discloses a method for hermetically sealing a semiconductor laser device using oxygen.

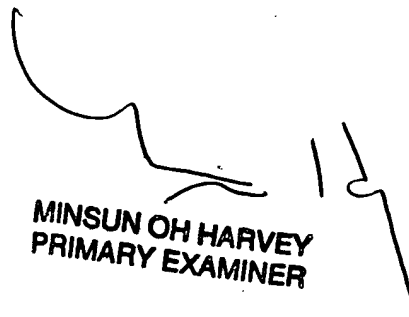
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xinning(Tom) Niu whose telephone number is 571-270-1437. The examiner can normally be reached on M-T, 7:30-5:00 EST, Alternate Fridays 7:30-4:00 ES.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Xinning Niu
02/12/2007



**MINSUN OH HARVEY
PRIMARY EXAMINER**